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Nata

Client:

LumCAT: 1-0788-M

Luminaire: 92.70.124.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1420

Lamp flux(lm): 2017.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.3000

Current(A): 0.4000

Power (W): 14.1200

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 1868.16, Efficiency(%): 92.62% , Luminous Efficacy(lm/W): 132.31

Central intensity(cd): 3209.238, Maximum intensity(cd): 3209.238

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.2

[C90/270]Total=36.2

Field angle(10%Imax): [C0/180]Total=85.4

[C90/270]Total=85.4

Maximum s/h(1/2): C0_180=0.58 C90_270=0.58

Maximum s/h(1/4): C0_180=0.65 C90_270=0.65

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.48%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.976%

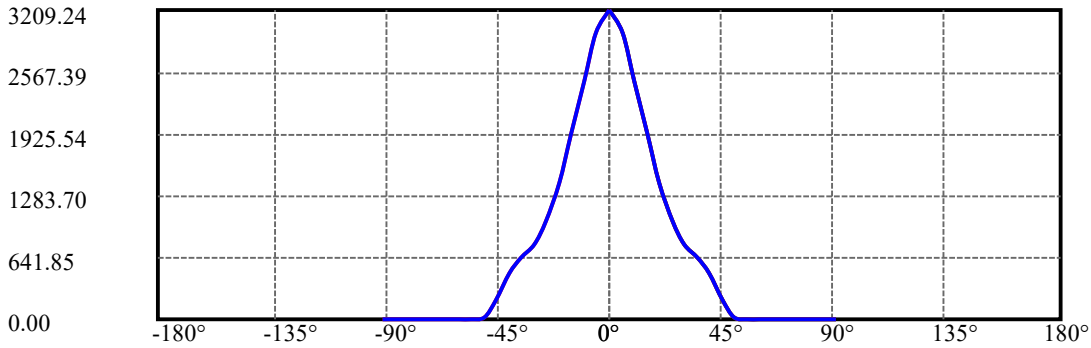
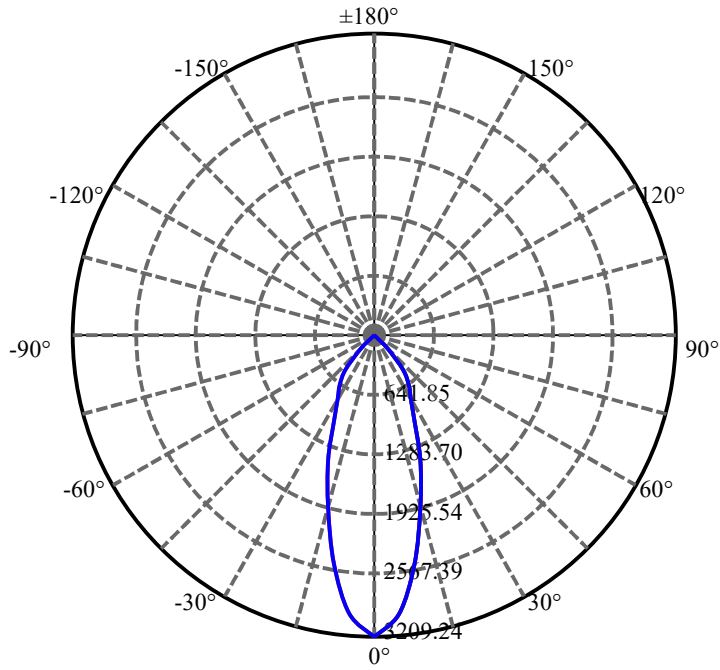
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3209.238	19.192	19.192	.952%	1.027%
5.0	2976.211	142.184	161.375	7.049%	8.638%
10.0	2469.830	235.086	396.461	11.655%	21.222%
15.0	1904.539	270.194	666.655	13.396%	35.685%
20.0	1423.621	266.892	933.547	13.232%	49.972%
25.0	1025.708	237.608	1171.155	11.780%	62.690%
30.0	780.851	214.007	1385.162	10.610%	74.146%
35.0	647.085	203.443	1588.605	10.086%	85.036%
40.0	470.010	165.601	1754.206	8.210%	93.900%
45.0	192.450	74.592	1828.798	3.698%	97.893%
50.0	25.849	10.854	1839.652	.538%	98.474%
55.0	8.988	4.036	1843.687	.200%	98.690%
60.0	7.818	3.711	1847.399	.184%	98.889%
65.0	7.412	3.682	1851.081	.183%	99.086%
70.0	7.219	3.719	1854.799	.184%	99.285%
75.0	7.123	3.771	1858.571	.187%	99.487%
80.0	7.068	3.815	1862.386	.189%	99.691%
85.0	7.040	3.844	1866.23	.191%	99.897%
90.0	7.027	1.926	1868.156	.095%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1385.16	68.67%	74.15%
0-40	1754.21	86.97%	93.90%
0-60	1847.40	91.59%	98.89%
0-90	1866.23	92.53%	99.90%
0-120	1866.23	92.53%	99.90%
0-180	1868.16	92.62%	100.00%
60-90	22.54	1.12%	1.21%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-32.69	1494.53	74.10%	80.00%

ZONAL LUMEN SUMMARY

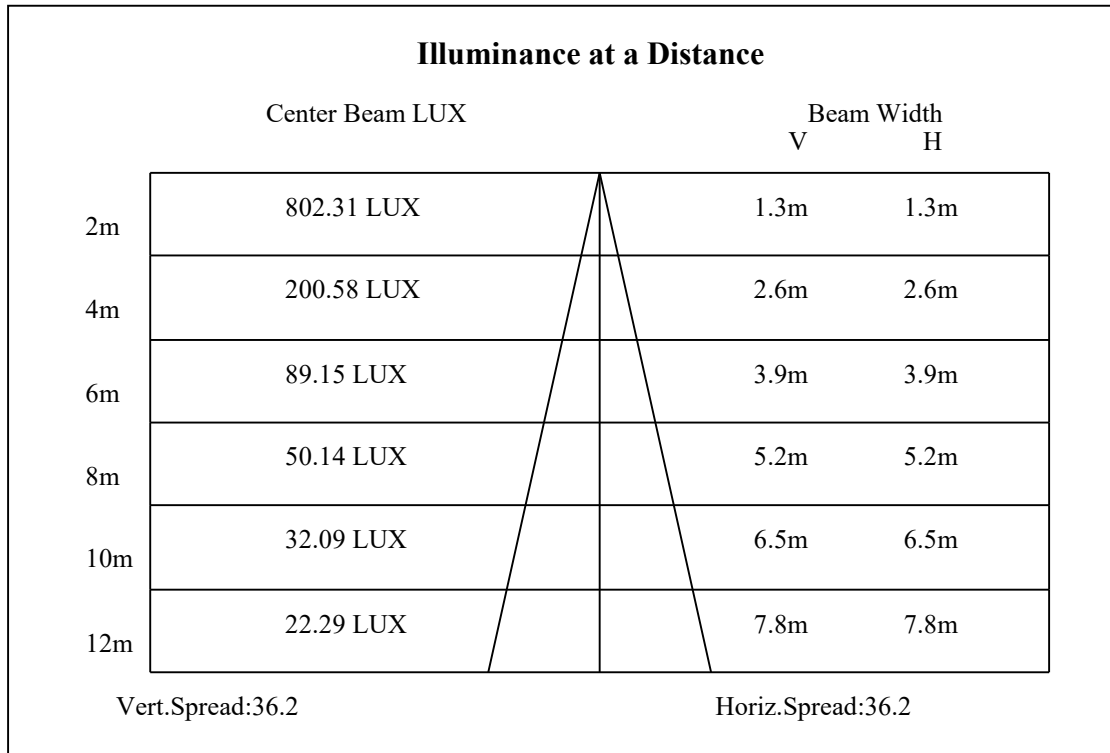
0-10	396.46
10-20	537.09
20-30	451.61
30-40	369.04
40-50	85.45
50-60	7.75
60-70	7.40
70-80	7.59
80-90	3.84
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

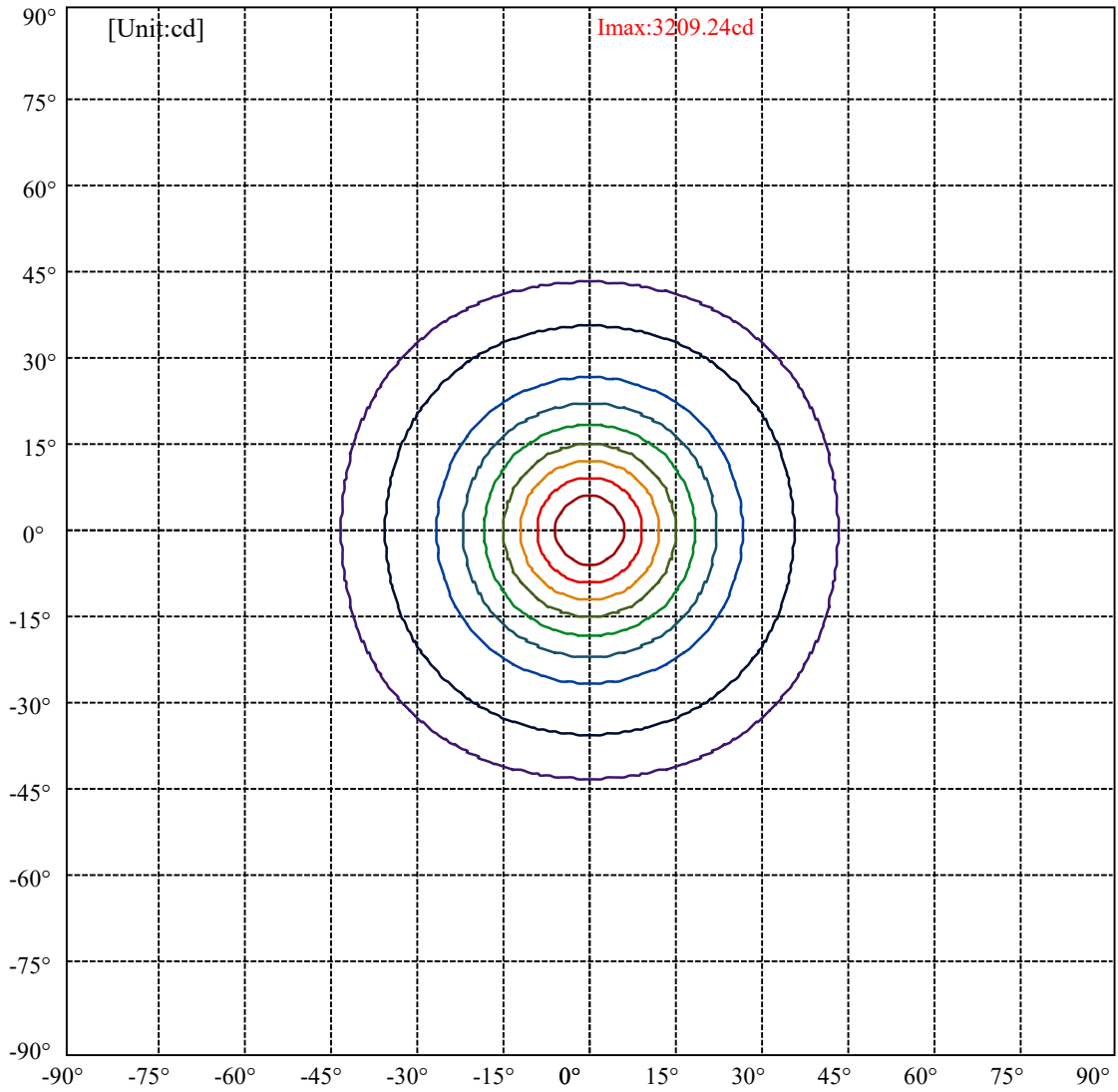


C0(Max): ———
C0/C180: ———
C90/C270: ———

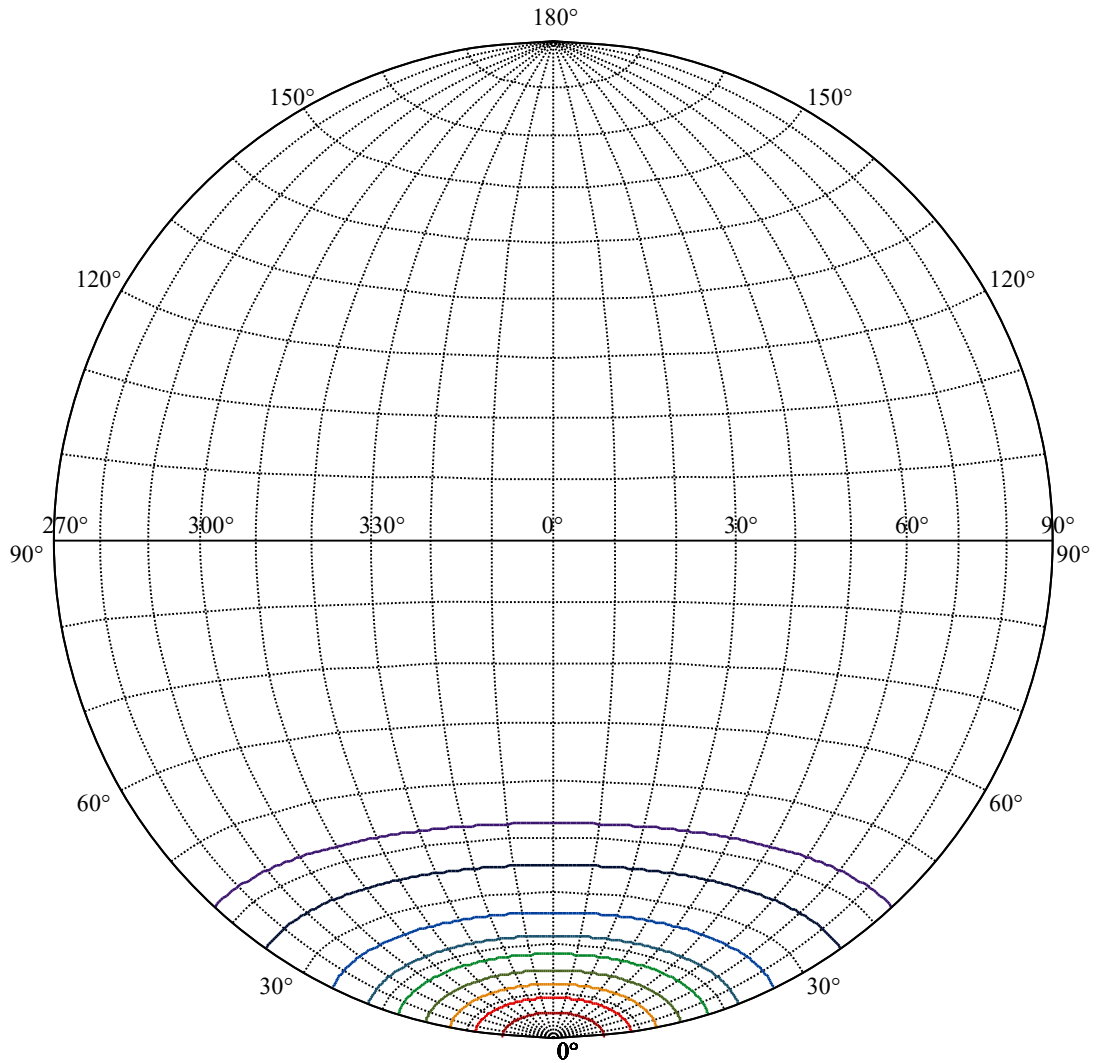
Field angle(10%Imax):C0/180Left:42.7 Right:42.7
:C90/270Left:42.7 Right:42.7

Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1
:C90/270Left:18.1 Right:18.1





(10%Imax) 320.924	—
(20%Imax) 641.848	—
(30%Imax) 962.771	—
(40%Imax) 1283.7	—
(50%Imax) 1604.62	—
(60%Imax) 1925.54	—
(70%Imax) 2246.47	—
(80%Imax) 2567.39	—
(90%Imax) 2888.31	—



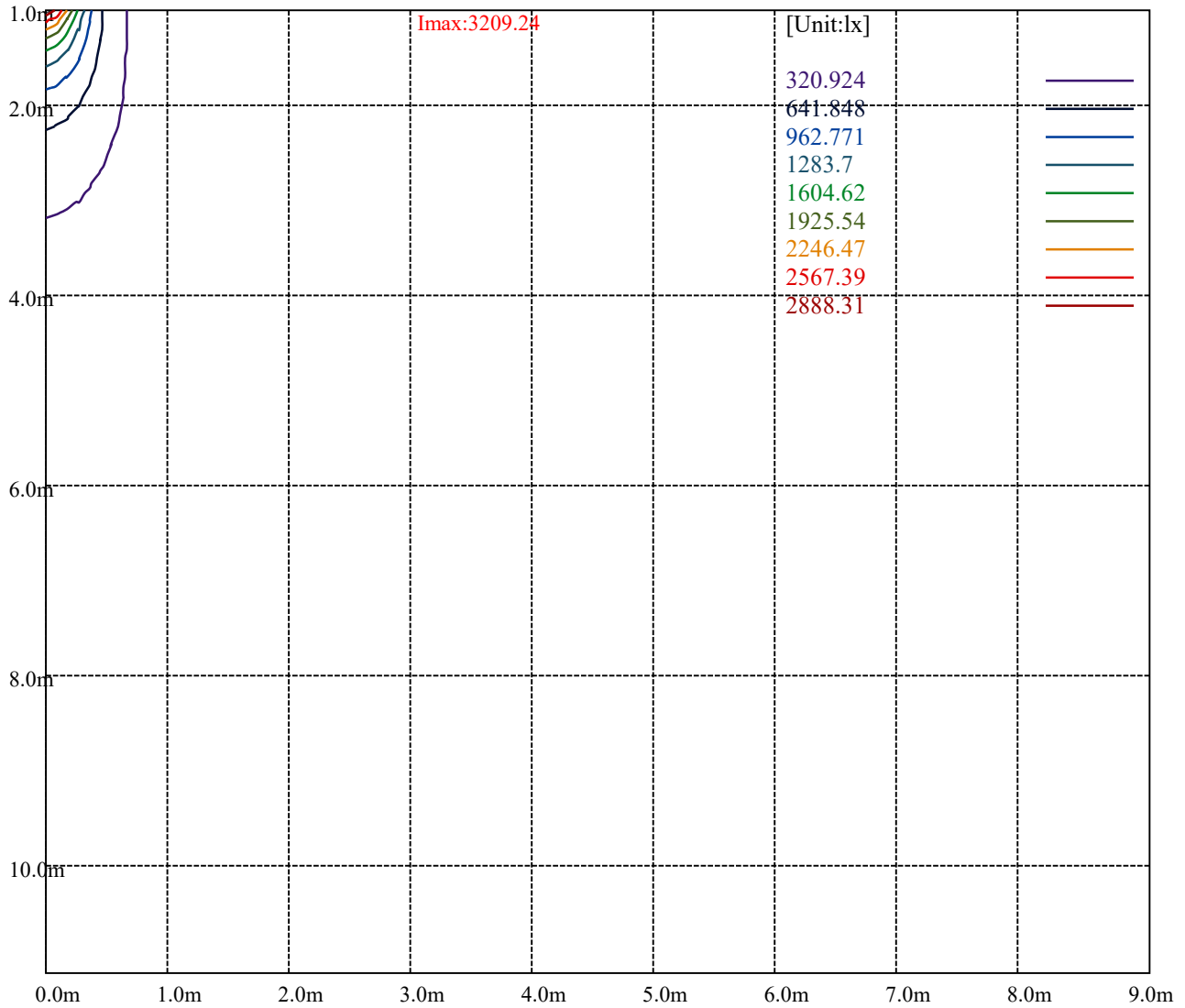
House

[Unit:cd]

Road

Imax:3209.24

(10%Imax) 320.924	—
(20%Imax) 641.848	—
(30%Imax) 962.771	—
(40%Imax) 1283.7	—
(50%Imax) 1604.62	—
(60%Imax) 1925.54	—
(70%Imax) 2246.47	—
(80%Imax) 2567.39	—
(90%Imax) 2888.31	—



Luminance Table

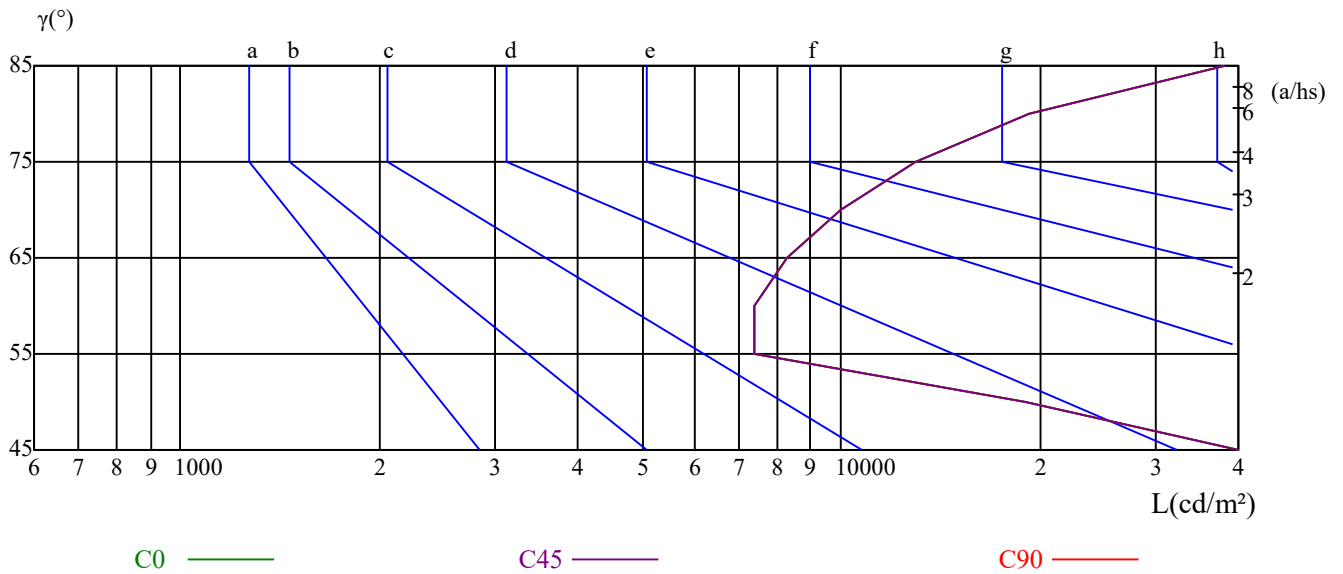
γ	45	50	55	60	65	70	75	80	85
C0	128622	19005	7405	7389	8288	9975	13006	19235	38175
C45	128622	19005	7405	7389	8288	9975	13006	19235	38175
C90	128622	19005	7405	7389	8288	9975	13006	19235	38175

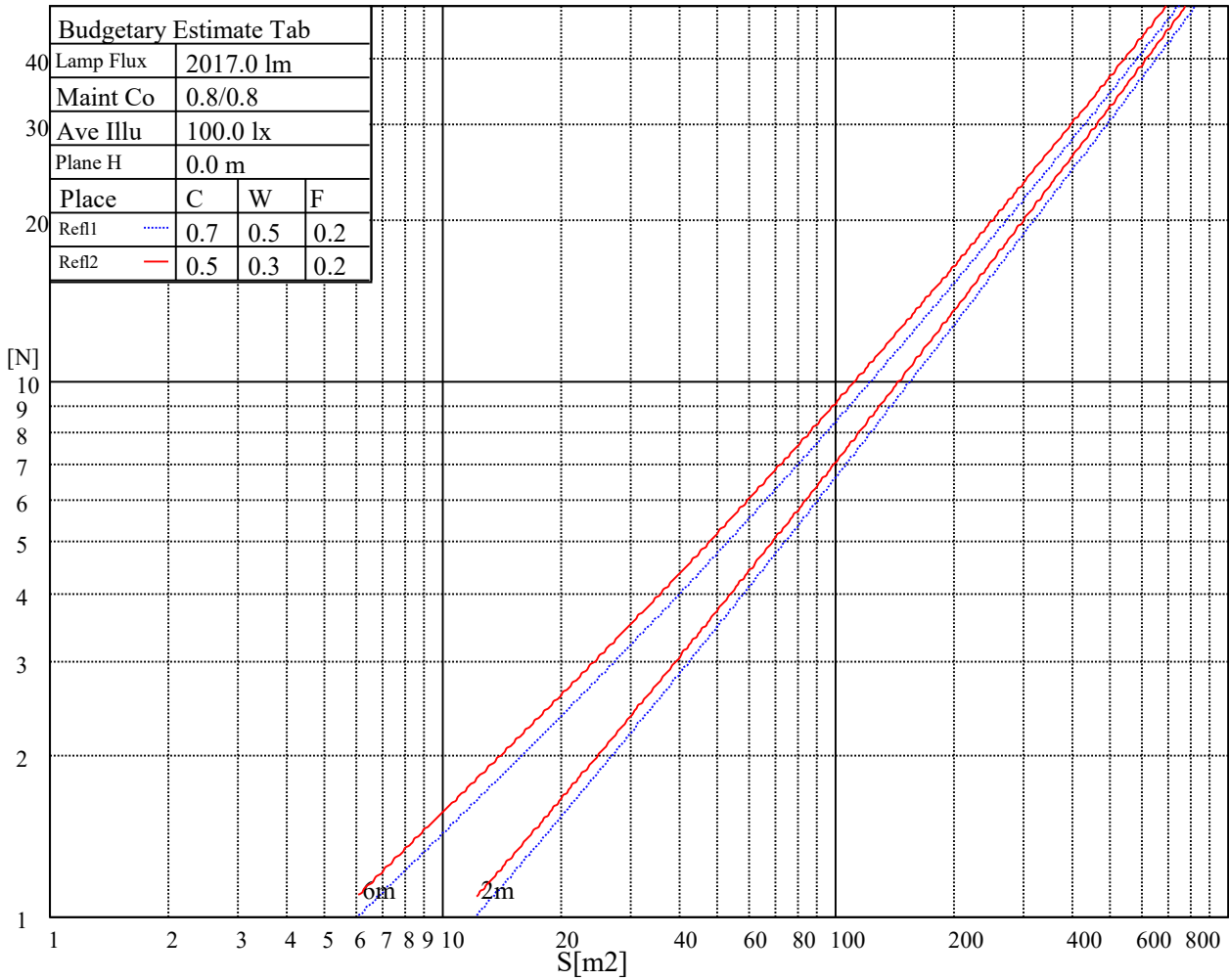
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8288	8288	8288	13006	13006	13006	38175	38175	38175

Glare Table

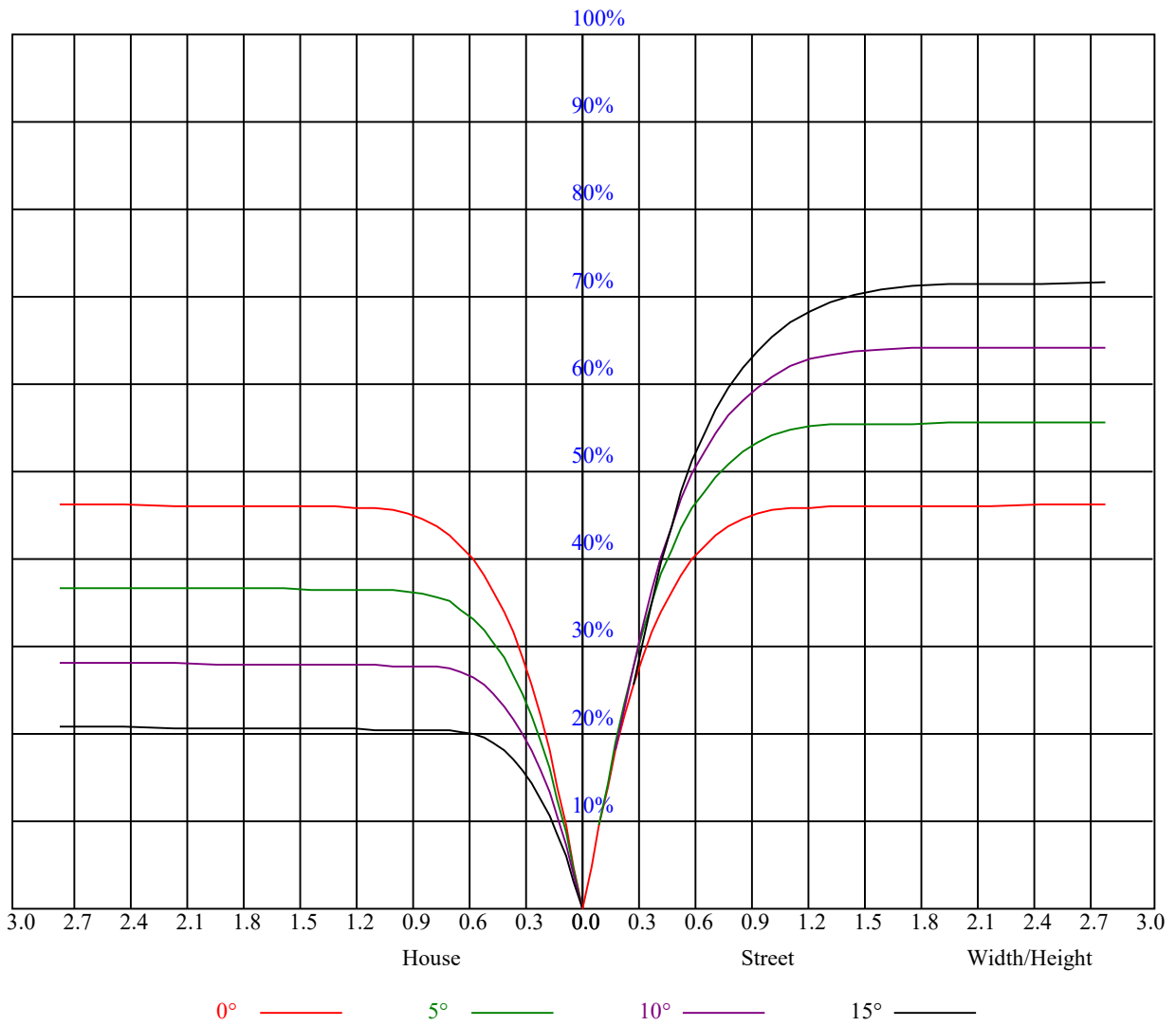
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

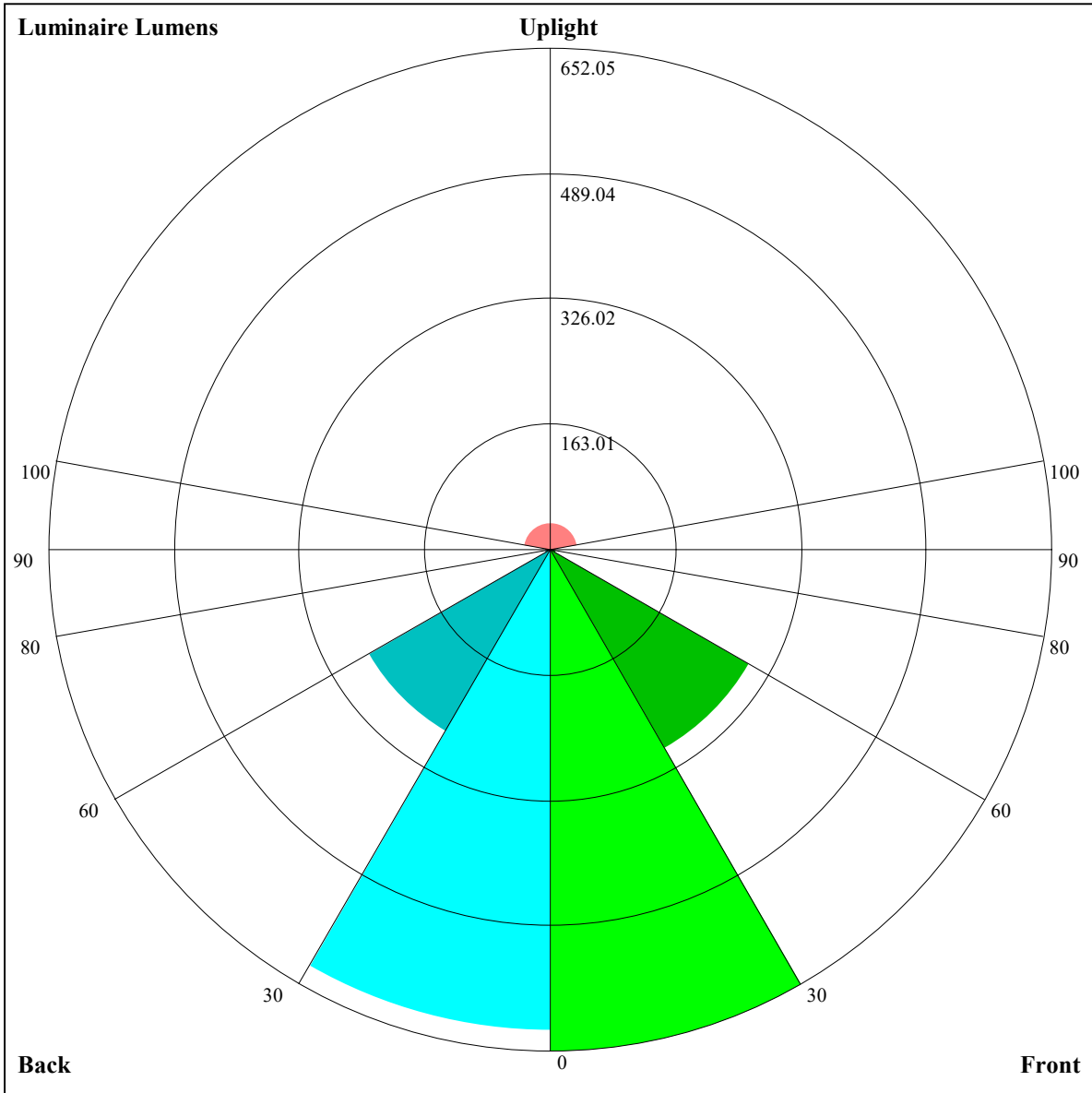
Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.00	0.98	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.96	0.92	0.89	0.94	0.91	0.88	0.91	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.86	0.82	0.89	0.85	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.76
4	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.71	0.79	0.75	0.71	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.64
7	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
8	0.69	0.63	0.60	0.68	0.63	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.58
9	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.55
10	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52





Luminaire Lumens:

FL=652.05,FM=297.7,FH=7.48,FVH=3.84

BL=625.6,BM=274.12,BH=7.47,BVH=3.84

UL=7.67,UH=36.48

BUG Rating:B2-U2-G0

Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3210.34	3073.80	2612.43	2029.38	1545.43	1113.24	819.79	673.89	536.25
45.0	3192.17	3091.97	2639.95	2114.72	1578.47	1146.82	841.81	686.55	562.68
90.0	3220.80	3025.35	2566.18	2000.75	1506.89	1087.47	813.90	661.39	527.94
135.0	3213.64	3077.65	2588.75	2001.85	1498.64	1094.52	807.13	659.58	524.14
180.0	3210.34	2889.91	2318.98	1771.71	1308.14	936.18	724.93	620.49	399.82
225.0	3192.17	2851.37	2282.64	1704.55	1285.02	920.32	732.58	609.53	376.75
270.0	3220.80	2920.19	2396.05	1808.60	1333.47	957.98	757.03	637.00	418.98
315.0	3213.64	2879.45	2353.66	1804.75	1332.92	949.12	749.65	628.25	413.53
360.0	3210.34	3073.80	2612.43	2029.38	1545.43	1113.24	819.79	673.89	536.25
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	282.44	35.84	9.86	7.93	7.43	7.21	7.10	7.10	7.05
45.0	290.70	46.36	9.69	7.93	7.49	7.27	7.16	7.05	7.05
90.0	235.26	29.29	9.74	7.98	7.49	7.27	7.16	7.05	6.99
135.0	280.79	27.31	9.69	8.04	7.60	7.32	7.21	7.10	7.05
180.0	105.65	17.34	8.26	7.71	7.38	7.21	7.10	7.05	7.05
225.0	84.90	13.38	8.15	7.60	7.27	7.16	7.05	7.05	7.05
270.0	129.00	18.55	8.26	7.71	7.32	7.16	7.10	7.05	7.05
315.0	130.87	18.72	8.26	7.65	7.32	7.16	7.10	7.10	7.05
360.0	282.44	35.84	9.86	7.93	7.43	7.21	7.10	7.10	7.05
C/ γ (°)	90.0								
0.0	7.05								
45.0	6.99								
90.0	7.05								
135.0	6.99								
180.0	7.05								
225.0	7.05								
270.0	6.99								
315.0	7.05								
360.0	7.05								